REMARKS

I.   STATUS OF THE CLAIMS:

Claims 1-18 are pending in the application.   Claims 1, 7, and 13 are independent claims directed to a virtual path configuration apparatus, a virtual path configuration method, and a computer readable medium storing instructions which cause the computer to perform operations for the virtual path configuration method, respectively.   Claims 2 to 6 depend on claim 1.   Claims 8 to 12 depends on claim 7.   Claims 14 to 18 depend on claim 13.

Independent claims 1, 7, and 13 have been amended hereby to overcome the rejection under 35 U.S.C. §102(e).

II.   REJECTION OF CLAIMS 13 TO 18 UNDER 35 U.S.C. §112, FIRST PARTAGRAPH, AS FAILING TO COMPLY WITH THE WRITTEN DESCRIPTION REQUIREMENT

In response to rejection of the claims under 35 U.S.C. §112, first paragraph, description at page 60 lines 6 to 22, specifically at page 60 lines 6 to 11, clearly recites that a program for realizing the functions of the virtual path configuration apparatus 100, 200, and 300 shown in Fig.1 may be recorded in a recording medium 1700 readable by a computer shown in Fig. 33, the program recorded in the recording medium 1700 may be read into the computer 1600 shown in the drawing and executed so as to realize the functions.   The recording medium is exemplified as an optical disc, a flexible disc, or a hard disc in the description at page 60 lines 21 to 22.   Further, Fig. 33 clearly discloses the recording medium 1700.   Therefore, the specification as originally filed clearly provides support for "computer readable recording medium" as is now claimed.

In view of the above, it is respectfully submitted that the rejection under 35 U.S.C. § 112, first paragraph, is overcome.

III.   REJECTION OF CLAIMS 1 to 18 UNDER 35 U.S.C. §102(e), AS BEING ANTICIPATED BY JAMIESON ET AL. (USP 6,813,644)

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Independent claims 1, 7, and 13 have been amended hereby to overcome the rejection under

35 U.S.C. §102(e) as being anticipated by Jamieson et al. (hereinafter, Jamieson).

(1)　　Features of amended independent claim 1 are that a virtual path configuration apparatus

included in each of nodes in a virtual private network to interconnect a plurality of user networks via

virtual paths and that is arranged in each node, comprising:

a configuration information setting unit that includes an input device for inputting setting

commands and information on ports accommodating user networks and nodes providing the ports, and

that sets configuration information that is information about sets of the ports and the nodes;

a configuration information sharing unit that shares the configuration information with the

other one of the virtual path configuration apparatuses included in the other one of the nodes, by

transmitting the configuration information being set by the configuration information setting unit to

the other virtual path configuration apparatuses or the receiving configuration information from the

other virtual path configuration apparatuses, wherein the configuration information sharing unit also

includes a synchronization determination section that receives response message to confirm each entry

is synchronized with each of the other nodes; and

a virtual path configuration unit that configures virtual paths between any combination of two

of shared ports over the relay network to relay packets between user networks based on the shared

configuration information.

It is respectfully submitted that Jamieson fails to disclose the features of a configuration

information setting unit, a configuration sharing unit, and a virtual path configuration unit, because of

the following reasons:

(i) In regard to the configuration information setting unit:

Claim 1 is amended to recite the feature of "a configuration information setting unit that

includes an input device for inputting setting commands and information on ports <u>accommodating</u> <u>user networks</u> and nodes <u>providing the ports,</u> and that sets configuration information that is information about <u>sets of the ports and the nodes;</u>".

The Examiner regards the PE (Provider Edge) as the configuration information setting unit. The Examiner asserts that a configuration information setting unit that includes an input device for inputting setting commands and information on ports and nodes is inherent, and this feature is disclosed at column 7, lines 44 to 47, column 7, line 43, and at column 7, lines 30 to 42 of Jamieson, and that Jamieson discloses setting configuration information that is information about configuration of the virtual private network at column 7, lines 30 to 57, and in Fig. 1 thereof.

However, Jamieson fails to teach or disclose the feature of the configuration information setting unit that includes an input device for inputting setting commands and **information on ports** *_accommodating user networks_* **and nodes** *_providing the ports,_* and that sets configuration information that is **information about *_sets of the ports and the nodes_*** (emphasis added).

(ii) In regard to the configuration information sharing unit:

Claim 1 is amended to recite the feature of "a configuration information sharing unit that shares the configuration information with <u>the</u> other <u>one of the</u> virtual path configuration apparatuses <u>included</u> in the <u>other one of the nodes,</u> by transmitting the configuration information <u>being</u> set by the configuration information setting unit to the other virtual path configuration apparatuses or the receiving configuration information from the other virtual path configuration apparatuses<u>, wherein the</u> <u>configuration information sharing unit also includes a synchronization determination section that</u> <u>receives response message to confirm each entry is synchronized with each of the other nodes;</u>".

The Examiner also asserts that, at column 7, line 66 to column 8, line 15, and in Fig. 1, Jamieson discloses that each PE is solicit-capable such that, upon receipt of a VPN connection request (without the VPN Reachability Information (VRI)), the PE will transmit a VRI request to all other nodes.

In order to distinguish the claimed invention from Jamieson, we clarify the feature that a configuration information sharing unit **shares the configuration information** *with __the__ other __one of__ __the__ virtual path configuration apparatuses* **included** in the **other one of the nodes** (emphasis added). We further add limitation of "<u>wherein **the configuration information sharing unit** also **includes a synchronization determination section** that receives response message to confirm each entry is synchronized with each of the other nodes</u> (emphasis added)".   These features are not disclosed in Jamieson.

(iii) In regard to the configuration information sharing unit:

Claim 1 is amended to recite the feature of "a virtual path configuration unit that configures virtual <u>paths between any combination of two of shared ports over the relay network to relay packets between user networks</u> based on the shared configuration information".

The Examiner asserts that, at column 8, lines 16 to 23, Jamieson discloses that once the peer node determines that it has received the VRI for that particular VPN, it transmits it to the requesting PE.

However, Jamieson fails to disclose the feature of the **virtual path configuration unit** that **configures virtual <u>paths between any combination of two of shared ports</u> *over the relay network* <u>to relay packets between user networks</u>** (emphasis added) based on the shared configuration information, because Jamieson has no relay network.

(iv) Thus, Jamieson fails to teach or disclose all of the features of amended claim 1. Accordingly, amended claim 1 is not anticipated by Jamieson, and therefore, amended claim 1 has novelty over Jamieson and is patentable.

(2)   Features of amended independent claim 7 are that a virtual path configuration method executed on a virtual path configuration apparatus <u>included in each of nodes</u> in a virtual private

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network for interconnecting a plurality of user networks via virtual paths and that is arranged in each node, comprising:

inputting setting commands and information on ports <u>accommodating user networks</u> and nodes <u>providing the ports</u>;

setting configuration information that is information about <u>sets of the ports and the nodes</u>;

<u>transmitting the configuration information to or receiving the configuration information from other virtual path configuration apparatuses included in other one of the nodes</u>;

sharing the configuration information with <u>the</u> other <u>one of the</u> virtual path configuration apparatuses <u>included</u> in the <u>other one of the nodes,</u> the configuration information <u>being</u> set by the configuration information setting unit<u>, and determining synchronization by receiving response message to confirm each entry is synchronized with each of the other nodes</u>; and

configuring virtual <u>paths between any combination of two of shared ports over the relay network to relay packets between user networks</u> based on the shared configuration information.

It is respectfully submitted that Jamieson fails to disclose features of each of the steps, because of the following reasons:

(i)   In regard to the step of inputting setting command:

Claim 7 is amended to recite the feature of "inputting setting commands and information on ports <u>accommodating user networks</u> and nodes <u>providing the ports</u>;.

The Examiner asserts that inputting setting commands and information on ports and nodes is inherent, and this feature is disclosed at column 7, lines 44 to 47, column 7, line 43, and at column 7, lines 30 to 42 of Jamieson. The Examiner also asserts "each PE supports links across multiple links" at column 7, lines 30 to 42 is interpreted as command, port, and node information.

However, Jamieson fails to teach or disclose the feature of inputting setting commands and **information on ports *<u>accommodating user networks</u>* and nodes *<u>providing the ports</u>*** (emphasis

added).

        (ii)   In regard to the step of setting configuration information:

        Claim 7 is amended to recite the feature of "setting configuration information that is information about <u>sets of the ports and the nodes</u>;".

        The Examiner asserts that setting configuration information that is information about configuration of the virtual private network is disclosed in Fig. 1 and at column 7, lines 30 to 57 of Jamieson, where "each PE only maintains relevant entries (per VPN)".

        However, Jamieson fails to teach or disclose the feature of setting configuration information that is **information about _<u>sets of the ports and the nodes</u>_** (emphasis added).

        (iii)   In regard to the step of sharing the configuration information:

        Claim 7 is amended to recite the feature of "sharing the configuration information with <u>the</u> other <u>one of the</u> virtual path configuration apparatuses <u>included</u> in the <u>other one of the nodes,</u> the configuration information <u>being</u> set by the configuration information setting unit<u>, and determining synchronization by receiving response message to confirm each entry is synchronized with each of the other nodes</u>;".

        The Examiner asserts that, at column 7, line 66 to column 8, line 15, and in Fig. 1, Jamieson discloses that each PE is solicit-capable such that, upon receipt of a VPN connection request (without the VPN Reachability Information (VRI)), the PE will transmit a VRI request to all peer nodes.

        In order to distinguish the claimed invention from Jamieson, we clarify the feature that **sharing the configuration information with _<u>the</u> other <u>one of the</u> virtual path configuration apparatuses_ <u>included</u> in the <u>other one of the nodes,</u>** the configuration information <u>being</u> set by the configuration information setting unit (emphasis added). We further add limitation of "**<u>determining synchronization by receiving response message to confirm each entry is synchronized with each of the other nodes</u>** (emphasis added)". These features are not disclosed in Jamieson.

(iv)   In regard to the step of configuring the virtual path:

Claim 7 is amended to recite the feature of "configuring virtual paths between any combination of two of shared ports over the relay network to relay packets between user networks based on the shared configuration information".

The Examiner asserts that, at column 8, lines 16 to 23, Jamieson discloses that once the peer node determines that it has received the VRI for that particular VPN, it transmits it to the requesting PE.

However, Jamieson fails to disclose the feature of **configuring virtual paths between any combination of two of shared ports** *over the relay network* **to relay packets between user networks** (emphasis added) based on the shared configuration information, because Jamieson has no relay network.

(v) Thus, Jamieson fails to teach or disclose all of the features of amended claim 7. Accordingly, amended claim 7 is not anticipated by Jamieson, and therefore, amended claim 7 has novelty over Jamieson and is patentable.

(3)   Independent claim 13 is amended mutatis mutandis to include the subject matter corresponding to claim 7.   Therefore, independent claim 13 also has novelty over the Jamieson and is also patentable.

(4)   Rejection over dependent claims is also overcome because they depend on patentable claims.

In view of the above, it is respectfully submitted that the rejection under 35 U.S.C. § 102(e) is overcome.

IV.   CONCLUSION

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.   Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to allowability of the above-identified application, please contact the undersigned at the telephone number listed below.

Please grant any required extensions of time and charge any fees due in connection with this request to deposit account No. 50-1290.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

/Pedro C. Fernandez/
Pedro C. Fernandez
Registration No. 41,741

CUSTOMER NUMBER 026304
Tel: 212-940-6311
Fax: 212-940-8986
Attorney Docket No.: FUSKA 20.981 (100808-00054)